

Remarks

Claims 1-32 are pending. Claims 33-48 were canceled. Claims 1-32 were rejected by the Examiner. The specification was objected to for informalities. The drawings were objected to. Claims 14-17 and 18-21 were rejected under 35 USC 112, first paragraph, as failing to comply with the written description requirement. Claims 1-7, 18-21, and 26-32 were rejected under 35 USC 103(a) as being unpatentable over Soumiya et al. (US 7, 136,357) in view of McCormick et al. (US 2002/0083260). Claims 8-17 and 22-25 were rejected under 35 USC 103(a) as being unpatentable over Soumiya in view of Hayashi et al. (US 2002/0083174), and further in view of McCormick.

Claims 8, 10, 14, 18, and 22 are amended. Claim 9 is canceled. The feature recited in claim 9 is incorporated in claim 8. No new subject matter is added. Claims 1-8 and 10-32 remain in the case for consideration. Reconsideration and allowance of claims 1-8 and 10-32 are requested in light of the above amendments and the following remarks.

Election/Restrictions

The provisional election of claims 1-32 without traverse for prosecution in the application is hereby affirmed. Claims 33-48 are canceled without prejudice to presenting such claims in a divisional application.

Drawings

The drawings were objected to for failing to show item 202 in FIG. 2 as described in the specification. But the specification does not describe the item 202. The applicant believes that the Examiner has misread the specification. As such, removal of the objection is respectfully requested.

The drawings FIGS.1-5 were objected to for being illegible. The replacement sheets for FIGS. 1-5 are attached in the Appendix following page 14 of this paper. Removal of the objection to FIGS. 1-5 is thus respectfully requested.

In the Specification

The specification was objected to by the Examiner. The specification is amended to reflect the following changes:

On page 4, line 8, replace “forwarding-plane 10c” with –forwarding-plane 24c–.

On page 11, line 15, replace “10/XXX,XXX” with –10/713,237–.

Claim Rejections – 35 U.S.C. § 112

Claims 14-17 and 18-21 stand rejected as failing to describe “a central registration point” in claims 14 and 18 in the specification in such a way as to reasonably convey to one skilled in the relevant art.

As mentioned in the specification, the central registration point may be referred to as the Distributed Control Plane Architecture (DCPA) Infrastructure Module (DIM) and possibly provided by the Distributed Control Plane Architecture (DCPA), disclosed in the co-pending US application 10/713,237, filed November 13, 2003. This is just one example of such a mechanism, but may promote ease of understanding of the claimed subject matter. *See* Specification, page 11, lines 12-15, and page 12, lines 14-17.

Applicant submits that there is more than ample description in the specification to enable one skilled in the art. As such, removal of the rejection is thus respectfully requested.

Claim Rejections – 35 U.S.C.103

Claims 1-7, 18-21, and 26-32 stand rejected as being unpatentable over Soumiya in view of McCormick. The applicant traverses the rejection for the following reasons.

Claim 1 recites “a control processor configured and arranged to execute a control portion of an interior gateway signaling protocol; and a line processor configured and arranged to execute an offload portion of an interior gateway signaling protocol.” Claims 18 and 26 recite similar features.

The Examiner alleges that Soumiya teaches the feature of a control processor and a line processor as recited in claim 1. But Soumiya does not teach a control processor and a line processor respectively implementing a control portion and an offload portion of the interior gateway signaling protocol recited in claims 1 and 18 or the routing protocol recited in claim 26. Soumiya’s FIG.8 merely illustrates a functional block diagram of an MPLS router. Specifically, FIG. 8 of Soumiya shows that the MPLS router 11 includes an IP packet transfer function 111, a routing protocol section 112, a path selection section 113, an LSP selection section 114, an LSP setting section 115 and a traffic engineering section 116. *See* Soumiya, Col. 10, lines 3-8. Soumiya fails to show how these functions may be implemented from a hardware perspective, e.g., are these functions implemented using multiple processors or a single processor? In fact, the Examiner has explicitly acknowledged that Soumiya does not show a control processor and a line processor as claimed. *See* Office Action, page 4, paragraph 9. Soumiya does not teach the features of a control processor and a line processor as claimed.

McCormick, on the other hand, discloses a multiprocessor control block, which includes a resource and routing processor 220, a plurality of intermediate processors 230-234, and a link layer processor 240. *See* McCormick, page 2, paragraph [0019], and FIG. 3. Specifically, the resource and routing processor 220 performs functions associated with resource distribution and routing of calls; the intermediate processors 230-234, each of which performs similar processing operations such as those included in the signaling link layer of the protocol stack of FIG. 4 as

well as call processing operations; and the link layer processor 240 performs data forwarding between the switch fabric and the intermediate processors associated with the physical link layer. *See* McCormick, abstract, page 3, paragraph [0025], [0027], and FIG. 4. McCormick defines the signaling link layer portion 295 of the protocol stack 290 to include functionality such as verification that the various links required by the system are up, and the signaling protocol portion 294 to include support for control traffic required for setting up calls, tearing down calls. *See* McCormick Page 2, paragraph [22]. That is, none of the processors in McCormick's multiprocessor control block perform functions associated with the interior gateway signaling protocol recited in claims 1 and 18 or the routing protocol recited in claim 26. Consequently, McCormick cannot teach separating the interior gateway signaling protocol recited in claims 1 and 18 or the routing protocol recited in claim 26, into a control portion and an off-load portion, and using two processors, a control processor and a line processor, to execute the control portion and the off-load portion respectively.

McCormick does not cure the deficiencies in Soumiya. Claims 1-7, 18-21, and 26-32 are therefore patentably distinguishable from Soumiya and McCormick. Claims 1-7, 18-21, and 26-32 are believed to be in condition for allowance.

Claims 8-17 and 22-25 stand rejected as being unpatentable over Soumiya in view of Hayashi, and further in view of McCormick.

Claim 8 recites "a control card... the control card including a control processor executing a control portion of the interior gateway signaling protocol... a line card... the line card including a line processor configured and arranged to execute an offload portion of the interior gateway signaling protocol ...communicating with the control card by a line card if there is a failure or a connection status change." Claims 14 and 22 recites similar features.

The Examiner alleges that Hayashi teaches communicating with the control card by a line card if there is a failure or a connection status change as claimed. As discussed above, Soumiya alone or in combination with McCormick does not teach a control processor and a line processor respectively implementing a control portion and an offload portion of an interior gateway signaling protocol or a router control protocol in general. Hayashi does not cure the deficiencies. As such, Hayashi cannot teach communicating with the control card by a line card when there is a failure or change in connection status.

Claims 8-17, and 22-25 are therefore patentably distinguishable from Soumiya, McCormick, and further in view of Hayashi. Claims 8-17, and 22-25 are believed to be in condition for allowance.

No new matter has been added by this amendment. Allowance of all claims is requested. The Examiner is encouraged to telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

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Respectfully submitted,

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